Remarks

Claims 1-43 are pending in the application and are presented for reconsideration without amendment. No new matter has been added.

Specification

The abstract of the disclosure is objected to because it is longer than 150 words.

The abstract has been amended and is now less than 150 words. The objection is believed to be overcome.

Claim Rejections

Claims 1-3, 5, 6, 8-10, 12, 14, 15 and 17 are rejected under 35 U.S.C. § 102(b) as being anticipated by Mourad et al. (US 2002/0095087 A1).

Claims 19-43 are allowed.

Claims 4, 7, 11, 13, 16 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Examiner's rejections of the claims are respectfully traversed.

I. Rejections of Claims Under 35 U.S.C. § 102

1. Legal standard for Rejecting Claims Under 35 U.S.C. §102

Under 35 U.S.C. § 102, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628 (Fed. Cir.), *cert. denied*, 484 U.S. 827 (1987).

2. Response to Rejections of Claims Under 35 U.S.C. § 102

a. Claims 1-4

Applicant's claim 1 recites:

> An indirect measurement system for determining an estimated value of a parameter of interest of an object, comprising:

a sensor that produces a raw measurement that is indirectly representative of said parameter of interest of said object;

a correction function that corrects said raw measurement to a corrected measurement to minimize measurement differences between said indirect measurement system and a reference indirect measurement system;

a reference map function that estimates said estimated value of said parameter of interest of said object based on said corrected measurement; and

a correction function fitting procedure that fits said correction function based on reference values for one or more calibration samples measured on or simulated for said reference indirect measurement system and corresponding values measured on said indirect measurement system.

The Mourad Reference

The Examiner cites Mourad as anticipating claim 1. In particular, the Examiner states that Mourad shows all of the features of the instant invention including an indirect measurement system (ultrasonic ABP) that is corrected with a reference function and a map function fitted to a reference indirect measurement system (BP cuff) using a small number of polynomial parameters (abstract, paragraphs [0034]-[0036], [0065], [0080]-[0082], and [0150]-[0168]).

Mourad does not teach or suggest "a correction function that corrects said raw measurement to a corrected measurement to minimize measurement differences between said indirect measurement system and a reference indirect measurement system". Mourad discloses a method for predicting ICP using only noninvasively-determined displacement and ABP data alone. [Mourad, paragraphs [0150]-[0168]. In step 1 (paragraph [0151]), a weight function is calculated between ABP and ICP using a system of linear equations. In step 2 (paragraph [0153]), the coefficients of a weight function between displacement and ABP curves are used as movement characteristics. In step 3, (paragraph [0155]), the relationships between the movement characteristics of step 2 and the coefficients of the weight function in step 1 are described by an approximating linear function. There is nothing in Mourad that can be equated with "a correction function that corrects said raw measurement to a corrected

measurement". Mourad generates measurements of invasive ICP, and invasive or non-invasive ABP; however, neither of these measurements are "corrected" to a "corrected" ICP measurement or a "corrected" APB measurement.

Furthermore, since the Examiner seeks to equate an "ultrasonic ABP" system with Applicant's recited indirect measurement system, then a "reference indirect measurement system" would have to also be a separate "ultrasonic ABP" system. However, there is no second ultrasonic ABP system described anywhere in Mourad.

Since Mourad does not teach a "correction function", Mourad also does not teach or suggest "a correction function fitting procedure that fits said correction function based on reference values for one or more calibration samples measured on or simulated for said second indirect measurement system and corresponding values measured on said first indirect measurement system" as required by Applicant's Claim 1.

Accordingly, Mourad does not meet the limitation "a correction function that corrects said raw measurement to a corrected measurement to minimize measurement differences between said indirect measurement system and a reference indirect measurement system" or "a correction function fitting procedure that fits said correction function based on reference values for one or more calibration samples measured on or simulated for said second indirect measurement system and corresponding values measured on said first indirect measurement system" as required by Applicant's Claim 1. Since Mourad does not meet each and every limitation of Applicant's claim 1, per *Verdegaal Bros., Inc., supra*, Mourad cannot be used in formulating an anticipation rejection under 35 U.S.C. § 102.

Claims 2-4 each depend from independent base claim 1 and add further limitations. For at least the same reasons that Claim 1 is not shown, taught, or disclosed by the cited references, Claims 2-4 are likewise not shown, taught, or disclosed. Thus, Applicant respectfully submits that the rejection of claims 2-4 should be withdrawn.

b. Claims 5-8

Applicant's claim 5 recites:

> A system for calibrating a first indirect measurement system with respect to a second indirect measurement system, said first indirect measurement system comprising a sensor that produces a raw measurement that is indirectly representative of a parameter of interest of an object sensed by said sensor, a correction function that corrects said raw measurement to a corrected measurement to minimize measurement differences between said first indirect measurement system and said second indirect measurement system, and a reference map function that estimates an estimated value of said parameter of interest of said object based on said corrected measurement, said system comprising:
>
> a correction function fitting procedure that fits said correction function based on reference values for one or more calibration samples measured on or simulated for said second indirect measurement system and corresponding values measured on said first indirect measurement system.

For the reasons stated above with respect to Claims 1-4, Mourad does not teach or suggest "a correction function that corrects said raw measurement to a corrected measurement to minimize measurement differences between said first indirect measurement system and said second indirect measurement system".

Since Mourad does not teach a "correction function", Mourad also does not teach or suggest "a correction function fitting procedure that fits said correction function based on reference values for one or more calibration samples measured on or simulated for said second indirect measurement system and corresponding values measured on said first indirect measurement system" as required by Applicant's Claim 5. Since Mourad does not meet each and every limitation of Applicant's claim 1, per *Verdegaal Bros., Inc., supra*, Mourad cannot be used in formulating an anticipation rejection under 35 U.S.C. § 102.

Claims 6-8 each depend from independent base claim 5 and add further limitations. For at least the same reasons that Claim 5 is not shown, taught, or disclosed by the cited references, Claims 6-8 are likewise not shown, taught, or disclosed. Thus, Applicant respectfully submits that the rejection of claims 6-8 should be withdrawn.

c. Claims 9-13

Claim 9 recites similar limitations to claim 1, including "a correction function that corrects said raw measurement to a corrected measurement to minimize measurement differences between said first indirect measurement system and said second indirect measurement system " and "fitting said correction function based on said obtained measurement values of said one or more calibration samples and corresponding known reference values measured on or simulated for said second indirect measurement system". For at least the same reasons that Claim 1 is not shown, taught, or disclosed by the cited references, Claim 9 is likewise not shown, taught, or disclosed. Thus, Applicant respectfully submits that the rejection of Claim 9 should be withdrawn.

Claims 10-13 each depend from independent base claim 9 and add further limitations. For at least the same reasons that Claim 9 is not shown, taught, or disclosed by the cited references, Claims 10-13 are likewise not shown, taught, or disclosed. Thus, Applicant respectfully submits that the rejection of claims 10-13 should be withdrawn.

d. Claims 14-18

Claim 14 recites similar limitations to claim 1, including "a correction function that corrects said raw measurement to a corrected measurement to minimize measurement differences between said first indirect measurement system and said second indirect measurement system " and "fitting said correction function based on said obtained measurement values of said one or more calibration samples and corresponding known reference values measured on or simulated for said second indirect measurement system". For at least the same reasons that Claim 1 is not shown, taught, or disclosed by the cited references, Claim 14 is likewise not shown, taught, or disclosed. Thus, Applicant respectfully submits that the rejection of Claim 14 should be withdrawn.

Claims 15-18 each depend from independent base claim 14 and add further limitations. For at least the same reasons that Claim 14 is not shown, taught, or disclosed by the cited references, Claims 15-18 are likewise not

shown, taught, or disclosed. Thus, Applicant respectfully submits that the rejection of claims 15-18 should be withdrawn.

Conclusion

In view of the foregoing remarks, it is respectfully submitted that none of the references cited by the Examiner taken alone or in any combination shows, teaches, or discloses the claimed invention, and that Claims 1-43 are in condition for allowance. Reexamination and reconsideration are respectfully requested.

Should the Examiner have any questions regarding this amendment, or should the Examiner believe that it would further prosecution of this application, the Examiner is invited to call the undersigned.

Respectfully submitted,

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